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OPTICO-CILIARY NEUROTOMY,  
AND MISCELLANEOUS SURGICAL CASES,

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*Cutting from:*

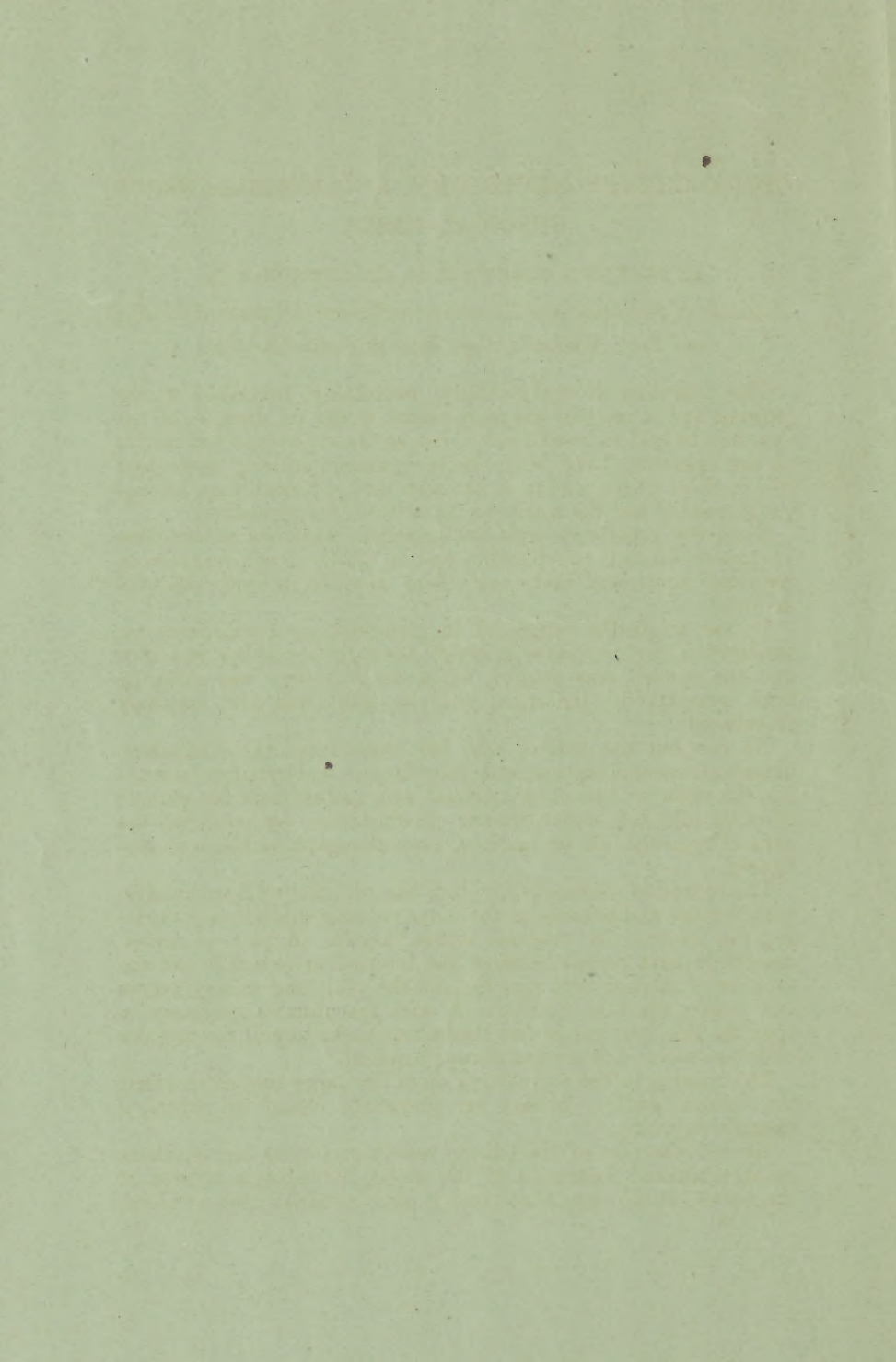
From "Transactions"  
of the South Carolina Medical  
Association, 1882.

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E. PERRY, PRINT.





# OPTICO-CILIARY NEUROTOMY, AND MISCELLANEOUS SURGICAL CASES.

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The operation of optico-ciliary neurotomy, described in the journals and in some of the more recent works on diseases of the eye, may be said to be still *sub judice*, as the experience and results of the operation have been confined almost entirely to the past two or three years, and it is thought that sufficient time has not yet elapsed to test the merits or demerits of this procedure.

From my experience with the operation, there is a certain class of cases to which it is applicable and in which it can scarcely be improved upon, and there are others in which its applicability is doubtful.

It was originally suggested in glaucoma, as a substitute for enucleation, in those cases in which the sight of one eye was lost, and the eyeball was painful, while the other eye was suffering from sympathetic irritation, and its sight was also seriously threatened.

No one but the patient who has experienced the discomfort, inconvenience and expense, and often the pain and irritation, attending the enforced use of an artificial eye, can estimate the amount of relief afforded, under similar circumstances, by retaining the natural eye, with all its motions, even though it be blind or disfigured.

The operation consists in dividing the conjunctiva horizontally, with forceps and scissors, at the inner or outer canthus and exposing the internal or external rectus muscle. A pair of curved scissors is next passed between the internal or external and the superior or inferior recti muscles, and the optic and ciliary nerves and vessels are then divided. A wire speculum is necessary to open the lids, and one or two strabismus hooks to pull the muscles aside are useful, but are not always required.

The opening in the conjunctiva should be large enough to admit the scissors easily. It may be afterwards closed by suture, if thought requisite.

After the section of the ciliary vessels and optic nerve, there occurs a marked protrusion of the globe, indicating a division of the nerve; at the same time there is often a sudden gush of blood,





but this is by no means the rule. I have never seen any serious bleeding; generally it is very slight, and it usually stops almost spontaneously.

An anæsthetic is usually given, though I know of one case in which a young woman underwent the operation without it, and bore it heroically.

When the operation was first proposed, it was thought necessary after the conjunctival incision, to divide the internal rectus muscle near its sclerotic attachment, as a preliminary step to the division of the optic and ciliary nerves, and subsequently to reunite its ends by suture. This has the advantage of giving more room, which is not necessary, and the great disadvantage of leaving the majority of the patients with a divergent squint. It is an unnecessary complication to the operation, and is often painful during recovery. So the first method here described is preferable, and is now, I think, generally adopted.

Though optico-ciliary neurotomy was suggested about sixteen years ago for glaucoma, it was soon supplanted by iridectomy, which still maintains its supremacy; so that the operation seems not to have been often performed for the relief of the disease for which it was originally designed.

In the past two or three years the operation has been revived and utilized in other affections of the eyes. Notably in two classes of cases—the one resulting from certain forms of disease, in which the sight of one eye has been lost, and pain is constant or remitting, and in which the destruction of the other eye is threatened from sympathetic irritation; the other from injuries by which the sight of one eye has been suddenly destroyed, such as from a perforating or lacerated wound, or from the entrance of a foreign body, exciting inflammation. In such cases the merits of the operation have been brilliantly demonstrated, and its success has been almost magical. Here is the real sphere of optico-ciliary neurotomy, and here it will always maintain its place, even though experience may subsequently prove that its application is a misuse of the operation in other cases for which it is not suited—and only in this sense can the operation be said to be *sub judice*.

One of the diseases for which optico-ciliary neurotomy has been suggested without promising results, or results not yet determined, is staphyloma of the cornea or the globe. I do not think it is applicable to this class of cases; because, as soon as the circulation is restored, the same causes which excited and kept up the disease before, though temporarily checked, will be renewed and continued. I have seen no accounts of a repetition of the operation under such circumstances.

It has also been proposed to perform this operation upon shrunken eye-balls which furnish good stumps for artificial eyes, insuring good motion, instead of enucleating such stumps at once. The apprehension of reunion of the optic and ciliary nerves, and

subsequent sympathetic irritation, causing risk to the good eye, has deterred surgeons from testing its utility in such cases.

From my experience with the results of this operation, I would not hesitate to try it in such cases, confidently relying upon enucleation afterwards, before serious injury could involve the good eye; *provided always*, that sympathetic disturbance had not already made its appearance. Under such conditions, the expedient would be dangerous and inadmissible. It often happens that patients refuse to submit to enucleation of the globe, but are willing to have the eye paralyzed by the operation under consideration.

I have twice operated, under such circumstances, with remarkably good results, for large ulcers, involving the greater part or the whole of the cornea; vision, of course, having been already hopelessly destroyed. The relief of pain and the rapid healing of the eye operated on, with the prompt cessation of lachrymation and photophobia in the other eye were remarkable as well as permanent results.

In these two cases the patients were very comfortable with large stumps partially distending the lids and preventing interference with the proper drainage of the tears, far more so than they would have been with artificial eyes, with all the annoyances attending them. I am disposed to advocate this operation in such cases among the laboring classes, rather than enucleation, believing that, should trouble subsequently arise, enucleation could be at once resorted to, and, in the meantime, the comfort of the patient would be decidedly enhanced.

I have operated ten times by optico-ciliary neurotomy with gratifying results, except in the case of incipient staphyloma of the cornea, which I here report (Case 4), with three others of sufficient interest to be recorded:

*Optico-Ciliary Neurotomy of the Left Eye for Traumatic Dislocation of Lens; Subsequent Removal of Cataract in Right Eye—Recovery.*

*Case 1, April 21st, 1880.*—John Smith, aged thirty-three years, Due West, S. C., sent to me by Dr. John A. Robinson. Twenty years ago the patient received an injury in the right eye from a billet of wood; violent inflammation followed; vision was lost. For twenty years he has suffered no inconvenience; he had good vision in the left eye. On the 25th of December, 1879, the right eye was again struck by a billet of wood, dislocating the lens into the anterior chamber; intense inflammation was set up, with sympathetic irritation and impaired vision in the good eye. For three months he has suffered intensely.

*Present Condition.*—The right eye is in a state of chronic inflammation, with the dislocated lens of a deep amber color, in the anterior chamber; the cornea is semi-opaque, the globe is hard and tense. He has severe and constant pain in both eyes, with profuse



lachrymation and photophobia. In the right eye vision is one-third; the ophthalmoscope reveals incipient cataract, and consequently the condition of the disc and retina is obscured. I would remark that I have, on several occasions, noticed the formation of cataract in one eye in persons under thirty-five years of age, associated with injury and loss of vision in the other eye. The natural inference is that, in such cases, the irritation in the injured eye causes changes in the lens of the good one, resulting in the formation of cataract. This association of cataract in one eye with injury in the other is not referred to in the text books as one of the causes of the disease.

The patient, having been admitted to the hospital, remained two days under observation, in order to determine the amount of pain caused by the dislocated lens, and to test the effect of the proposed division of the optic and ciliary nerves; in this case, the condition of the cornea being such, that there was little chance of union of the flap made by the usual incision for the removal of the lens, now in the anterior chamber. This seemed a good opportunity to test the success claimed by its advocates for this operation, in paralyzing sensation in the globe, retaining all its motions, and yet making it innocuous to the other eye. During the two days prior to the operation, large doses of morphia were administered, without relieving pain or producing sound sleep.

*April 24th.*—The operation was performed at 12 M., before the class of the Medical College, Prof. Michel and other members of the profession, being present. It was the first operation of the kind performed in Charleston. The patient having been chloroformed, and the eye-lids separated by a wire speculum, a free incision was made in the conjunctiva, exposing the border of the internal rectus muscle, this was held out of the way by a strabismus hook, and a pair of curved scissors having been passed into the opening, avoiding the superior rectus muscle, the ciliary nerves and vessels and the optic nerve were divided. There was a sudden gush of blood, and a marked protrusion of the eye-ball consequent upon the division of the vessels and the optic nerve. The hemorrhage soon ceased, cold water dressings were applied, the patient was put to bed, and slept quietly, *without anodyne*, till the next morning.

*April 25th.*—The eye is swollen and bulges forward, with ecchymosis of the conjunctiva, the lens remains harmless in the anterior chamber; the patient is free of pain in both eyes, the first time since the accident, four months ago, unless under the influence of anodyne.

After this the case progressed favorably; apart from cold water dressings no other treatment was used, except to give some astringent pills to control a diarrhœa which supervened, independently of the operation.

*May 7th.*—The opacity of the cornea has cleared up, the eye has regained its normal appearance, with all its motions, only that

the lens is in the anterior chamber; sympathetic irritation has subsided in the left eye, vision has not improved owing to the presence of incipient cataract, previously referred to.

*May 16th.*—He was now sent home (at the end of three weeks) with directions to return for operation as soon as the cataract was fully developed.

*July 7th.*—I saw the patient to-day, near his home in the country; the right eye, which was operated on, has not given any trouble; vision in the left is rapidly growing worse as the cataract advances.

*November 13th.*—Smith was again admitted to the City Hospital, totally blind from cataract in the left eye. The right eye, which had been operated on, April 24th, was a little smaller than the other, and was free from all irritation or pain, with a harmless lens in the anterior chamber.

On November 20th, I operated for cataract, by Græffe's method, successfully, and on the 12th of December the patient was discharged, with useful vision.

At this date, April, 1882 (more than two years since the operation of optico-ciliary neurotomy), Dr. Jno. T. Robinson writes me that "Smith continues his duties as a miller without any trouble from the right eye, and with fair vision in the left."

*Case 2, April 1st, 1880.*—Mrs. H. R., referred to me by Dr. D. D. Sams, aged fifty years, received an injury in the right eye in December, 1879, about five months ago, from a piece of wood which she was cutting with an axe. Violent inflammation ensued, resulting in complete opacity of the cornea and consequent loss of vision. She had never been free of pain in the injured eye since the accident. It is normal in size, but with marked congestion of the conjunctiva and ciliary zone, and an opaque granular cornea.

The left eye had latterly suffered from constant neuralgia and defective vision, which was now reduced to about three-quarters.

Upon examining this case, I suggested two means of relief to the patient: first, the prompt enucleation of the injured eye, with the insertion subsequently of an artificial eye; second, optico-ciliary neurotomy. I explained that by either of these operations I hoped to relieve the danger to the good eye; that in the first case an artificial eye would entail certain inconveniences and expense; that in the second, the operation proving successful, she would be relieved from pain in that eye, and that the other would most probably be also relieved, and vision restored in a comparatively short time.

As usual, the patient declined operative procedure, and requested medication and topical applications, in the vain hope of relief. The usual remedies were tried in rotation, for some time, with little temporary and no permanent relief, and I lost sight of her.

*April 27th, 1880,* she returned, stating that the pain in the right eye (the injured one) had increased, and that vision in the left was worse. Upon examination, I found the injured eye unaltered in appear-



ance, but that vision in the left was now reduced from three-quarters to one-half. By refusing to submit to operative procedure a month ago, with every chance of successful restoration of sight in the good eye, and with relief of pain and irritation in the blind one, she had, apparently, sacrificed the chances of saving her good eye, as it was now questionable whether either of the operations suggested would relieve the sympathetic irritation. In the case, as now presented according to the views generally accepted, the safest method of relief would have been to enucleate the globe at once.

The patient was now willing to submit to any procedure which promised relief from pain in the bad eye and a chance of restoration of vision in the other. I decided to perform the operation of optico-ciliary neurotomy, being sure of affording relief from pain, and intending subsequently to enucleate the globe, should this become necessary.

*April 28th.*—The operation was performed in the presence of several medical friends.

It is unnecessary to detail the notes of this case. All pain in the injured eye subsided at once, and the ecchymosis disappeared; in about a fortnight the eye possessed all its motions, the chronic congestion of the conjunctiva and ciliary zone subsided, the cornea remained opaque, but lost its granular appearance, all sympathetic irritation subsided in the left eye, and normal vision was restored in less than a month.

It is now two years since the patient was operated on. The result has been in every way satisfactory. The only change noticeable in the eye operated on is, that it is a little smaller than the other. Vision in the left eye is still normal.

*Case 3, August 16th, 1880.*—P. McG., mechanic, aged forty-six, consulted me for a large central corneal ulcer of the right eye, of one month's standing. He had received an injury, some five or six years before, which had destroyed vision from consequent inflammation and general opacity of the cornea. In the interval he had suffered no inconvenience from the injured eye, until a month ago, when it was again injured by a fragment of iron rust. For a month he had suffered from the usual symptoms consequent upon corneal ulcer, and had given up work.

When I saw the case, all the layers of corneal tissue had yielded, and the membrane of Descemet formed a hernia in the ulcer, threatening perforation of the anterior chamber, with the usual disastrous consequences.

In such cases, with a leucomatous cornea, old iritis, ciliary and capsular adhesions, with probably an opaque lens, and a large central ulcer, it is very difficult to heal the ulcer, particularly if the patient belongs to the laboring class. We may succeed in some instances, after prolonged suffering and treatment, but there is



always liability to a relapse, from slight injury, with a return of all previous troubles.

The best resort in such cases, until the introduction of the operation of optico-ciliary neurotomy, was to enucleate the globe promptly, and secure the preservation of the other eye.

As a rule, patients shrink from either alternative when first suggested. There is a natural aversion to the loss of a member, even though it may have been useless for years, and the patient prefers to try palliative measures. In this case, the usual treatment in such cases was carried out for about a month, without improvement, and in the meantime the other eye became seriously involved. He became discouraged, and I lost sight of him about the first of September.

*October 15th, 1880.*—The patient returned, with the whole cornea in a sloughy condition. He had lost three month's work and had undergone intense suffering. Enucleation, which I thought now would afford prompt relief, was declined, and optico-ciliary neurotomy was substituted.

For some weeks, he said, he had taken anodyne nightly to obtain rest. The operation was followed by subsidence of all pain. Anodyne was not required again. The photophobia, lachrymation and irritation in the other eye quickly passed away. In less than a month the stump of the eye operated on healed over, and the patient resumed his employment.

I have resorted to the same operation in two similar cases, with the happiest results. Patients should be warned of the danger of sympathetic neuralgia to the good eye, subsequently to be apprehended, and, if necessary, enucleation of the stump should be effected in time to avert serious trouble.

*Case 4, October 1st, 1881.*—M. M., aged nine years, a delicate girl of scrofulous habit, lost the left eye from a large central corneal perforating ulcer, in July—about three months ago.

The greater part of the cornea was opaque, the anterior chamber obliterated, and the iris was adherent to the posterior surface of the cornea, with contracted pupil. Vision was practically lost, and an artificial pupil could not be made.

For the past two months, staphyloma of the cornea had come on, and was increasing so rapidly that the eye would soon require enucleation for this affection.

It occurred to me to try the operation of optico-ciliary neurotomy, hoping to arrest, if not cure, the increasing staphyloma.

*October 8th.*—I performed the operation. It was followed by promising results for three months. There was not only a temporary arrest in the growth of the staphylomatous cornea, but a marked subsidence in its prominence.

At the end of three months, however, it began to enlarge again, and is now about its original size. This was due probably to the

re-establishment of the circulation in the ciliary vessels. I do not know what has been the experience of others who have tried the same operation in similar cases, or in cases of general staphyloma of the globe. In the present instance, I propose to operate again on the patient. Should it be found that optico-ciliary neurotomy, repeated two or three times, at long intervals, delays the growth of the staphylomatous cornea, it would, in many cases where the eye is not too much disfigured, and is not endangering the other, be preferable to sacrificing the eye by enucleation, and subjecting patients to the attendant evils of an artificial eye.

#### MISCELLANEOUS SURGICAL CASES.

##### *Bony Stenosis of the Nose—Operation—Recovery.*

*Case 1, October 9th, 1881.*—J. B. S., aged twenty-six, was sent to me by Dr. H. W. DeSaussure, suffering from nasal cararrh. He stated that from infancy he had never breathed freely through the left side of his nose; that it was always stopped up on taking cold, and that for a year or more the secretions had become offensive to himself and others; that he had great difficulty in clearing out the passage on that side in the morning, and his discomfort was increased by a muco-purulent discharge, and the formation of crusts of mucus, which were removed with difficulty. Owing to these secretions the sense of smell was wanting on that side of the nose.

Upon examination with Fraenkel's nasal speculum (by far the best of all nasal specula) and reflected light, I detected a large congenital exostosis attached to the lower border of the vomer, extending from the anterior meatus of the nose, backwards to the posterior naso-pharyngeal opening, touching the inferior turbinated bone, and closing the middle and superior meatuses on that side. In addition to this, there was lateral deviation of the septum nasi to the left side, reaching near to the superior and middle turbinated bones. There was also partial paralysis of the left ala of the nostril; its internal border fell in upon the prominent exostosis, near the anterior palatine spine, closing this side of the nasal aperture.

Upon dilating the nostril on that side, I detected that the inferior meatus was open, and that as long as the speculum was in place, the patient breathed comfortably; but that the meatus was small, admitting only No. 1 of Dr. Clinton Wagner's nasal probes, the anterior border of the inferior turbinated bone being depressed by the exostosis projecting from within outwards, from the anterior end of the vomer.

The patient was not disposed to have a radical operation performed. I, therefore, dilated the inferior meatus, beginning with probe No. 1, and gradually introducing Nos. 2 and 3, and finally,



No. 4, the largest size. I then inserted Wagner's "nasal dilators," which answered very well for the time, but produced too much irritation to be used continually. This improved his breathing on that side, but did not check the offensive muco-purulent discharges forming in the middle and superior meatuses, which were retained by the exostosis extending across the left nasal cavity. By the use of the nasal douche, deodorizing sprays, and the dilatation of the inferior meatus of the nose, the patient was in a measure relieved, but as soon as these remedies were discontinued, all his difficulties recurred.

I then suggested the propriety of boring out the nasal cavity, and removing the long exostosis from the vomer, which would have the double advantage of opening the inferior meatus, permitting respiration on that side, and also of opening communication with the middle and superior meatuses, so as to allow a free escape of the pent up secretions. I was also curious to see if the operation would restore the sense of smell on that side.

*November 10th.*—The operation was performed to-day, without chloroform, in the presence of Dr. H. W. DeSaussure and others, with Wagner's burrs, attached to a dental engine, kindly lent to me by Dr. S. S. Solomons. The exostosis was successfully drilled away, reopening all the meatuses. The operation lasted nearly three-quarters of an hour, the bony exostosis being very hard, but the operation was not so painful as I had expected; indeed, Mr. S. said that he had often suffered more from the plugging of a bad tooth; the hemorrhage was slight.

The after treatment consisted in using deodorizing sprays and douches. In a month the mucous membrane had covered the exposed bony surfaces in the nasal cavities; the patient breathed comfortably through that side of the nose; there was no further trouble from pent up secretions and offensive discharges; and the sense of smell was also restored on that side. The patient is now well and comfortable.

While lateral deviation of the septum nasi is very common, congenital stenosis of the nasal passage is rare. This was the first case of the kind I had ever seen. I have since seen another, the exostosis occluding the outlet of the left meatus, but not extending far back, as in this instance. Dr. Salley, of Columbia, informed me that he was consulted a few months ago by a man from Lexington county, for stenosis of the nose, very similar to the case here reported. I have also been consulted, by a physician in North Carolina, about a case of a similar character, in a girl about nine years of age, which I have not yet seen.

I append an extract from Cohen, on "Diseases of the Throat and Nasal Passages," showing the rarity of these affections, and describing some of the cases which have been reported:

"In one instance of this affection, in an infant under my own observation, there was great difficulty in suckling and breathing,

and frequent suffocative paroxysms. An opening was made from the nostrils into the pharynx by boring through the occluding structures with a knife and a steel probe; and this passage was kept open, and enlarged from time to time by the insertion of a sound, and subsequently of small bits of sponge securely fastened to a holder. In this way passages were made representing the lower and middle meatuses. The operation was always attended with considerable hemorrhage, and was a frightful one in appearance, from the struggles of the child, the spattering of the blood, and the suffocative spasms that it produced. As soon as a permanent passage was secured, the child's nutrition improved at once, and markedly.

"Dr. Carl Emmert has narrated\* a case upon which he operated successfully. It was a seven-year-old boy, who from birth had been unable to breathe through the nose, and who had been nourished only with great difficulty when an infant. He was subject to attacks of suffocative paroxysms in his sleep. The nose was well formed, but the choanæ were entirely closed. Not the slightest stream of air was perceptible at the nostrils. Mucus was continually running from them, and on weeping, the discharge was accompanied by a stream of tears. The closure of the choanæ was due in this case, as shown by a preliminary examination with the sound and as confirmed during the operation, to the presence of a bony wall or partition, covered on both sides with mucous membrane; but it was impossible to ascertain in what manner or from which bones this complete anterior wall of the naso-pharyngeal space took its origin.

"Luschka, in continuation of the subject, narrates the following case which occurred under his own observation: It was a female infant who died shortly after birth. The bony framework was formed, on both sides, from the palate-bone. The free sloping border of the normally sized horizontal portion was continued in the form of a thin compact plate which inclined somewhat outward and backward, and rose up as high as the inferior face of the sphenoid bone, with which it was connected by a dentated border. The plate of bone rested with sharp border upon the median side of the internal laminae of the wings of the sphenoid. In the middle line, where, in the normal condition, the nasal spine arises, the lamella joined with that of the opposite side; while both, in their further course upward, were separated by a very narrow fissure, in which the posterior border of the rudimentary vomer had its attachment.

"Voltolini mentions a case of total occlusion of the right posterior outlet,† apparently due to congenital adhesions, and long mistaken for nasal tumor. The true condition was revealed on rhinoscopical

\* (Lehrbuch der Chirurgie, Stuttgart, 1853, Bd. II, p. 355.) Luschka: *Der Schlundkopf der Menschen*, 1868, p. 27.

† *Die Anwendung d. Galvanocaustik, etc.*, 2d ed., Wien, 1870, pp. 240, 262.



inspection, and was submitted to operation by the galvano-cautery.

"Betts\* reports a case in a fetus of seven months, in which the posterior nares were imperforate in consequence of the presence of two triangular bones articulating above with the sphenoid, below with the horizontal plate of the palatine bone, exteriorly with the lesser wings of the pterygoid apophyses, and impinging on each other interiorly, so as to leave a median fissure.

"Exostoses of the nasal passages are comparatively infrequent. They may originate in some portion of the osseous framework of the nasal passage, even the vomer;† sometimes they begin in the orbit, but they are most frequently extensions from the antrum. Great bulk may be acquired in the latter variety especially, producing marked deformity of the nose and face. The *symptoms* are impediment to nasal respiration, pain, muco-purulent discharge, and tendency to hemorrhage. The *diagnosis* is determined by inspection and palpation. The *treatment* consists in removal or destruction by forceps, saw, chisel, drill, or burr, access to the tumor being made through the nostril, or by more or less extensive external incision, as the case may require.‡ In a case of exostosis developed from the palatine ridge of the superior maxilla, and in the vomer, in my own care, it was found comparatively easy to grind the offending mass away through the natural passage, with the burr of the dental engine, the parts being exposed by detaching the overlying mucous membrane and periosteum, which were replaced after the exposed surfaces had been carefully polished by the corundum wheel.§"

### *Imperforate Rectum and Anus—Operation—Recovery.*

I report the following case, as recovery is unusual when there is a deficiency in the development of the rectum so high up, associated with an undeveloped anus, and, more particularly, because the improvised treatment adopted in the early history of the case by the father of the child, a farmer, was novel, contrary to all surgical precedent, and showed a remarkable tolerance of the rectum for foreign bodies. He saved the life of his child, in spite of the original and unorthodox treatment to which it was subjected.

*Case 2, July 16, 1881*—I was requested by Drs. P. L. Horn and J. P. Millard, to operate at George's Station, on the following case:

The patient was a child aged nine and a half months, the son of Mr. W., a farmer, the youngest of four children, the eldest of whom was deformed from birth.

A day or two after it was born it was found that the anus was

\* Arch. de Toxicologie, Sept., 1876; N. Y. Med. Jour., July, 1877, p. 97.

† See Case of Removal, Michel, Gaz. heb., 1873, Nos. 24, 25.

‡ For example see Mott. Am. Jour. Med. Sci., Jan. 1857, p. 35, illustrated; Duka. Trans. Path. Soc., London, Vol. XVIII., p. 256.

§ Med. and Surg. Rep., Phila., July 13, 1878, p. 39.

imperforate, and was represented only by a small slit or depression, and the rectum of course could not be detected. Drs. Horn and Millard operated with a large sized trocar and canula, thrusting it into the depression and in the direction of the rectum, which they fortunately perforated at the depth of two inches, some meconium escaping. There was slight hemorrhage. The anal opening was enlarged, and the father, who lived fifteen miles in the country, was furnished with graduated bougies, and proper instructions how to use them. The case then passed from their observation. Finding that the canal had a constant tendency to contract, and often having difficulty in getting the bougies into the rectum, the father substituted a quill with the ends cut off, fastening it in the rectum by sewing one end to a T bandage—the feces passing through the quill. The child thrived, strange to say, and he next substituted for the quill pieces of cane, which he secured in like manner. He showed me these original instruments; the cane was about the size of my little finger.

In the mean time, the artificially elongated anus had skinned over, but the opening in the rectum was small and constantly inclined to contract, and had frequently to be re-opened with a probe or small bougie.

On one occasion, the bougie, of usual length, slipped into the rectum. The father told me he thought it was a "gone case then," but on the third day it was discharged through the cane. When the child was about six months of age, the opening in the rectum closed, and evacuations ceased; other physicians attempted to enlarge it, but failed, being deterred by hemorrhage, and gave up the case. The father again resorted to the probe and bougie, re-opened the bowel, and continued his treatment as before, with quill and cane. The tendency to contraction finally overcame the perseverance of the father, and when I saw the child on July 14th, evacuations had ceased for three days, it was robust in appearance, but was suffering from distention of the bowels.

The anus was about two inches deep, admitting a No. 12 catheter at the external orifice, and tapering towards the rectum. The child was chloroformed, and by using Notts' dilators, I enlarged the canal sufficiently to see that the orifice was at the anterior wall of the *cul-de-sac* of the rectum; I re-opened it with a probe, and then freely incised it backwards with a probe pointed bistoury. A copious fecal evacuation followed.

I then incised the whole canal towards the sacrum, introduced my little finger, and easily detected the band forming the rectal *cul-de-sac*, which I freely divided in several directions, entirely relieving the constriction. The hemorrhage from this operation was slight.

The father was now supplied with graduated rectal bougies, and the proper instructions how to use them. The distance at which he lived prevented the physicians from seeing the case often.



It is doubtful if the quill actually entered the rectum, certainly the cane did not—their use was chiefly to dilate the long canal representing the anus, which evidently contracted rapidly on their removal. The original opening in the rectum, made by the trocar in the first operation, was only imperfectly kept open by the constant probing and finally it also closed.

We cannot but admire the perseverance of these poor parents in clinging to the hope of preserving the life of their only son, when circumstances prevented their retaining the services of Drs. Horn and Millard, or other competent advice.

It is the only instance, however, in my experience, where the mother despaired of saving her child, and the father's faith and nerve remained unshaken. For nine months he had almost daily used these rude instruments, determined not to give up "so long as the child thrived," and it did grow and thrive in spite of all the torture, prompted by affection, to which it was subjected.

On August 5th, Dr. Horn wrote to me that the case was progressing satisfactorily in all respects. The aperture was enlarged to the size of the largest bougie we gave the father, and the child passed his feces with ease. It appeared as if the canal was being gradually lined with normal mucous membrane.

I presume regular dilatation will be required for months, and even then, the tendency to contraction of the long canal representing the anus will continue. Ten months after the operation I was informed that the case was doing well.

*Epithelioma of the Tongue—Supra Hyoid Operation—Paquelin's Thermo-Cautery—Recovery.*

*Case 3, May 21st, 1881.*—Emma White, a mulatto girl, aged six years, was admitted to the City Hospital, suffering from epithelioma at the base of the left side of the tongue, near the hyoid bone. She was delicate and anæmic, and small for her age. Her mother stated that the tumor had appeared above three years ago. When first noticed, it was about the size of a pea, and a little elevated above the surface. It caused little inconvenience at first, but soon began to increase slowly, and bled more or less at irregular intervals; sometimes the hemorrhage was alarming and difficult to control. Latterly it had increased rapidly in size, and bled more frequently and freely. The bleeding now came on once or twice a month, and on the last occasion, a few days ago, it had been so profuse that the child's life was endangered. The tumor is now the size of a small olive, occupying the left side of the base of the tongue, and projecting a little above its border; it is indurated and nodular, with an ulcerated surface, covered with a dirty, offensive muco-purulent secretion. She did not complain of pain in eating, and the tumor gave little annoyance, except as above stated. The mother was urgent to have something done

before the accession of another hemorrhage. As the girl's strength had been impaired by repeated loss of blood, she was ordered quinine and iron, with a generous diet.

*May 30th.*—The tumor was situated so near the base of the tongue, that it was impossible to remove it without incising the cheek as far as the ramus of the jaw on the left side, or resorting to Prof. Syme's operation, by dividing the lower lip and jaw, or to the supra hyoid operation—Regnola's.

I preferred the latter, which, provided the horizontal incision is made well under the margin of the lower jaw, lessens deformity from cicatrix, heals more promptly, and is followed by less pain in the after treatment.

The operation was performed at 12 M., at the City Hospital, with the assistance of Prof. Michel and others of the hospital staff. The patient being chloroformed, and the mouth held open by a gag, an incision was made from the hyoid bone to the chin, and two lateral ones from the anterior end of this, on each side, along the margin of the jaw for an inch. The flaps were dissected back, the genio-hyoid muscles exposed, and the left one was divided near its mental insertion; a pair of scissors was then passed into the floor of the mouth, and the muscles and mucous membrane were divided to the extent of the two lateral incisions. A ligature having been then passed through the tip of the tongue, was carried through the opening, and the tongue drawn forcibly forwards and downwards to the hyoid bone, and held by an assistant. This brought the tumor within easy reach. I removed it by Paquelin's Thermo-Cautery. The operation was quickly performed. I have often done it on the dissecting table, to exhibit the distribution of the ranine artery.

There was little bleeding from the primary incision, one small vessel was ligated. There was no hemorrhage from the tongue, except one large drop of blood, as the cautery divided the dorsal artery of that side of the tongue. The lips were unfortunately seared by the cautery, owing to the small size of the cavity of the mouth. The tongue was then replaced, the cut extremity of the left genio-hyoid muscle was united by animal sutures and clipped off, and the wound closed as usual by silver sutures.

There was some febrile action for several days, the child suffering more from the seared lips than the seared tongue, after which she took nourishment freely through a tube and rapidly recovered.

She was discharged at the end of a month, with very little deformity from the incisions, and the large cavity in the tongue, occasioned by the application of the thermo-cautery, the latter having healed promptly by granulation, and with little induration. At last accounts, a year after the operation, the tumor had not returned.

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## TWO CASES OF SCIRRHUS OF THE COLON.

Having exhibited and described, at the meeting of the Association, two pathological specimens of scirrhous tumors of the colon, occurring in Charleston, which excited some interest in the profession at the time, as the patients were well known in the community, and as these cases presented some peculiarities and obscure symptoms, I was requested to write out my remarks on them for publication. This can be best done by inserting here the letters of my friends, Dr. W. C. Ravenel and Dr. W. H. Huger, which were also read at the meeting of the Association, and who kindly lent me the specimens, at my request. They were among the most interesting specimens shown at the meeting, and called forth from other members remarks concerning cases of a somewhat similar nature.

It was a remarkable coincidence that the deaths of these two well-known citizens should have occurred about the same time; that both should have died of the same disease, scirrhous tumor of the colon; and that both should have had so little pain in connection with the location of the morbid growths, which are usually of a very painful character when situated in connection with the abdominal viscera:

CHARLESTON, S. C., 20th April, 1882.

*Dear Doctor*—In compliance with your request, I herewith give you a few facts in regard to the illness and death of the late Dr. ———. For the last six or eight years of his life, he suffered from attacks of asthma and bronchitis, brought on by exposure to the fumes of gases, whilst engaged in the legitimate duties of his profession, as a chemist. It was in the fall of 1879 that his attention was first accidentally attracted to a small, movable abdominal tumor. It gave him no trouble until January, 1881, when, having gradually increased in size, he became conscious of its continued presence. It was more a source of annoyance from its presence than an actual cause of pain. He never but twice suffered severe attacks of pain from it. The tumor would at times increase in size, and then suddenly decrease, the diminution being generally followed by numerous operations, consisting of fecal matter, intimately mixed with blood.

The tumor was examined by a number of physicians, and different opinions were expressed as to its nature. Some considered it a floating kidney, and others, a malignant tumor of the mesentery, attached to and communicating with the intestine. The chylopoetic viscera after a while became affected, and continued so to the time of his death, which occurred on the 11th of March, 1882.

An autopsy, made fifteen hours after death, principally for the purpose of ascertaining the character of the morbid growth, revealed a scirrhous tumor of the transverse colon, about twice the size of a goose's egg. The tumor almost entirely obliterated the calibre of the intestine, leaving a narrow strictured track for the



passage of fecal matter. Within the last twenty-four hours of the life of the deceased, the intestine ulcerated through into the cavity of the abdomen. The perforation was on the ascending colon side of the stricture, being at the bottom of a dilatation, caused by said stricture. The dilatation and stricture accounted for the increase of size of the tumor from time to time. The mesenteric glands were enlarged, and infiltrated with cancerous matter. The liver was cirrhotic. The kidneys were in proper position and normal.

The above are the principal facts, connected with this case, which may be of interest to you.

DR. F. L. PARKER.

Yours, very truly,

WM. C. RAVENEL.

*Dear Doctor*—In compliance with your request, I will give you the facts connected with the case of the late J. H. A., who first called on me to prescribe for him about July, 1881. He was then suffering from a temporary derangement of the digestive organs. He was relieved in a few days, and I did not see him professionally until in December last, five months afterwards, when he was similarly affected, and was again relieved in a short time. His general health seemed good; he was a stout man, weighing 180 pounds. He next called at my office on the 12th February, 1882, to consult me. His appearance was so changed that I scarcely recognized him; he was greatly emaciated, having lost about sixty pounds in weight; was thoroughly jaundiced, and complained of occasional pain in the right iliac region, and said that he had "a small lump in the side." On examination, I found a tumor, which I diagnosed as scirrhus, and believed that it was connected with the liver. In a few days great irritability of the stomach was set up, and he vomited constantly, the bowels becoming inactive, and it required large doses of active medicine to move them; he became more feeble daily, and the little food that he was able to take was not assimilated, and caused great suffering. For ten days the bowels could not be moved, and his sufferings were allayed by morphia, used hypodermically. An autopsy was made some twelve hours after death; a scirrhus tumor was located in the ascending colon, and had entirely encircled the gut, and prevented anything passing the structure. Above this point the gut was enormously distended, and contained a large quantity of ingesta; the bowels were much congested and softened; the liver was congested and softened, but of normal size.

I have learned that Mr. A. had been treated in the past year by a number of physicians, the homœopathic included.

I have sent you the pathological specimen, and an examination of it will give you a better idea of the nature of the tumor than my description can.

Yours, truly,

W. H. HUGER.

DR. F. L. PARKER,

Charleston, April 23, 1882.



